

Vancouver Island B. C.

Apr 25 - '08

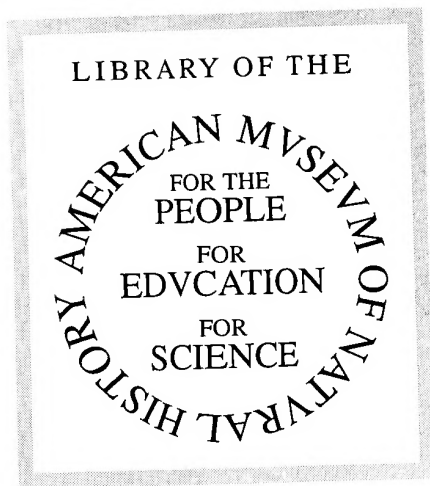
(i.e. June - Aug. 1908)

Alaska

Aug 1 - 27



Roy C. Andrews
American Museum
Natural History
New York



K. 219

encl

On ~~June~~ ^{August} 9, 08 at 4 o'clock in the morning I was awakened by a knock on my door & the words, "It's four o'clock Sir & the 'Orion' is ready to go" I pulled on my rubber boots and oil-skins and was soon out on the wharf where a small boat was waiting to take me ~~on~~ to the steamer. It was a beautiful morning and as we sailed down the Sound toward the open ocean the sun first peeped over the far-away snow-capped mountains, drove long slanting paths through the fog which hung low over the water ahead. ~~Then~~ miles of steaming among the little wooded islets of ~~the Sound~~ ^{the coast} brought us to Cape Horn while gaining the entrance to the straits of Magellan, and we were soon riding the long swell of the open Pacific. Ahead of us the fog lay like a great white blanket but the wind which soon began to break the top of the waves into white-caps gave promise of a clearing away the mist in the morning was far advanced. Mile after mile was registered by the whirling log which trolled in the water behind us,

and when we were some thirty miles at sea the Captain told me that we were then on the edge of the feeding grounds where we could expect to see whales at any time. Hardly had the words left his mouth when the man in the "barrel" at the mast head sang out "Whale on the port side." We looked to the left & there was a faint mist just dissolving in the wind nearly half a mile away - almost instantly another cloud of vapour shot up into the air, and then in a whirl of white water the whale sank. "Humpback" said the Captain but he's all alone; it won't pay to chase him." The steamer kept on ahead, ~~and~~ we did not see the whale again although from the bridge with the glasses in my hand I swept the water on every side. Evidently the great animal had not found the little sea-shrimp on which it feeds & which float just under the surface of the water, & was "on the run" as the whalers call it, looking for new grounds. Twenty miles more and no whales in sight, and the wind began to freshen. The little

steamer rolled + pitched + tumbled as she plunged into the great waves, her decks washed by the water which swept over her at every plunge.

"Sea-sick" asked the Captain as he saw my face begin to lose colour and my hands grasp the rail of the bridge to steady myself. "A little" I answered, but the boy had not been told, for few are the men even those ~~who~~ long used to the sea who are not put "under the weather" by their first day on these little round-bottomed, rolling whalers.

It was three o'clock in the afternoon before the man in the barrel again ^{saw} "whales ahead". I made my way forward along the pitching decks, climbed the steep ladder to the bridge and stood ~~by~~ beside the Captain. "There they are" he said pointing over the starboard bow, and looking in the direction indicated I could just make out four or five spouts far in the distance. A little further on and another spout appeared on the port side followed by the "flukes" or tail of a huge whale. This whale

spouted, & then went down head
 foremost drawing the flukes out of
 water, throwing them & half of
 the body into the air. That
 a Squalidactylus said the Cap-
 tain as he swung the steamer's
 bow toward the place where
 the whale had disappeared, &
 signalled for full speed. The little
 vessel plunged through the waves
 & was soon almost in front the
 long "slide" of smooth green water
 left by the whale as it sank. Here
 we stopped waiting for the whale
 to blow again. However we were
 doomed to disappointment, for
 no sight ~~was~~ of the animal
 was again obtained. "He's travelling
 for feed" said the Captain & we left
 him - "we see what these fellows
 are doing". The other whales, which
 were humpbacks, could be seen frequently
 at intervals on the starboard side,
 but were moving fast; this was
 a bad sign for it indicated that
 food was scarce, & the animals
 would be hard to approach. And such
 was the case we found, for each
 time when we neared a whale, aft-

are at two spouts, it would sink
 and not be seen again. When diving
 these humpbacks ^{would draw} started ~~the~~ ^{head} first
~~under the water~~, slowly the back would
 come into view, then the dorsal fin &
 the peduncle - only once did I see
 a humpback draw the flukes out
 of the water. On this dive the back was
 "humped" or rounded, so that the part
 appearing above the surface had the
 form of an arc of a circle. When
 first appearing the animals would
 usually blow with just the top of
 the head showing; disappear and
 in about thirty seconds rise again
 for another spout. On this second
 spout more of the body was shown
 above the surface, & the animal
 dove in the manner described
 above. Once or twice I saw a whale
 blow three or even four times before
 taking the final "big blow", but twice
 was the usual number. The length
 of time under the surface varied
 considerably but I did not find this
 exactly by my watch, but it was
 from ten to twenty minutes.

After nearly two hours of chasing
 first one, then another of this school

of Humpbacks the last one was lost
 to view and we started ahead in search
 of more. Twenty miles were passed,
 putting us seventy miles out to
 sea, before we were rewarded by the
 sight of another whale. This time one
 was seen close on the starboard side
 and seemed to be feeding. Hastily I
 followed the Captain from the
 bridge up ^{forward} to the harpoon gun when
 with camera in hand, I braced
 myself against a rope. The steamer
 was pitching furiously and when
 she climbed a huge wave to flunge
 her bow down on the other
 side it was all ~~as soon~~ ^{one} could do
 to keep his feet. Clinging to the
 rope with one hand, ~~of which I held the~~
 lens of my camera ^{from the flying spray} with the
 other, I waited till the whale should
 reappear. Suddenly the Captain
 said "there he comes on the port
 bow" & looking in the direction
 indicated I saw the water begin
 to smooth out in a large green
 patch about 100 yards away.
 Almost instantly the whale burst
 into view, sending his spout
 to the height of fifteen feet or

fifteen feet into the air. Evidently he saw us for he was down again in a second without another blow, only to reappear again some yards astern. At each time, he blew, the act was accompanied by a loud "sucking" sound, such as would be made by a person drawing the breath forcibly thru' half-closed lips. Again he came to the surface, ~~this~~ on the starboard side, and ~~the~~ the noise of his single spout sounded like the muffled clap of two great hands. Time after time he showed himself, never near enough for a shot or good pictures, and seemed to be enjoying the game of tag he was playing with us, to the fullest extent. Twice he ~~jumped~~ threw himself clear out of the water, showing even the tips of the flukes, & ~~facing~~ ^{facing} back with a resounding slap, like the report of a gun. Once his head & ~~throat~~ ^{throat} back to ~~the~~ fins were thrust off out of the water but always beyond the range of either gun or camera. Once however after he had been down

an unusually long time, the ~~harpoon~~ pilot saw the steamer
 nose into just the right position
 & the whale ran right under our
 starboard bow. ~~He was down again~~
 As he rose, the crash of the harpoon
 gun sounded, but a great wave
 had thrown the steamer bow
 into the air at just the wrong
 time, & the ~~harpoon~~ harpoon did not
 reach its mark. This was all
 however for we did not see the
 whale again.

We remained out all night as it was
 too far to run into land that
 evening, but the next day was
 rough and no hunting could be
 done. Coal was needed so we came
 back to Sechart, reaching there about
 two o'clock in the afternoon.

Summary Humpback


Small number of times of 8 foot - 2-foot
 ranging from 1 to 4 -

8 foot from 10 to 15 feet high as near
 as could be judged -

8 foot always accompanied with
 noise, such as would be made by a
 person sucking in the breath from
 their hand closed lips - sometimes

noise of surf sounds like muffled clap of
hands.

Black always left on water when
whale goes down - also just before
he rises to surface -

Spout looks like this  in shape -
Flukes only shown by one whale when
diving -

One humpback thrust himself clear out
of water twice.

Length of time under water 10 & 20 min.

surface 330 surf 8 to 16
and good light

Humphreys July 8 - 08

Flukes usually drawn out of water when diving the many times but -

Many of the whales I saw had the flukes white below - others black above & below -

Several times I saw two whales apparently standing on their heads throwing their flukes from side to side & lashing the water into foam - this was done several times. These whales were blowing continually & not staying under water very long when diving - The spouts were usually about 10 or 15 feet high & the first one of the whales re-appearing at the surface, was the largest & highest - Several times I saw a whale spout close to the vessel, & saw that the blowholes were distorted greatly during the operation - (see photo) & the blowing was accompanied by a loud "huh" - The whales of this school seemed to be in pain to a certain extent

The ~~wheeler~~ had come in late in the night and as she must take an ^{hour} ~~crab~~ before starting it was 9 o'clock ~~in the morning~~ ^{next} before we got away from the wharf. It was a beautiful day with a light westerly wind blowing in from the sea just sufficient to ruffle the tops of the waves into white foam as they rolled & broke. The mountains about Hyugot Siquid were never more beautiful with their ^{peaks in} changing colors of lavender & deep purple ^{rising} above the ^{green} clothing of fish & kumbrak - we ran down the sound, past the little village of Siwash huts at the entrance to the harbor and were soon rolling on the long swell of the open bay. A heavy fog was banked up close to the edge of our land but half an hour running put us beyond the gray wall of mist, & the blue water stretched away to the ~~of~~ shy line.

I was on the bridge with the Captain when after an hours run, the man in the barrel shouted, "Whale on the starboard side!" "How many" asked the Captain - "Four" said the look-out, "and they are moving fast" That was a bad sign, but the vessel's nose was

pointed in their direction, and the
 signal for full speed ahead was
 given. Watching the horizon line
 intently I saw a column of spray
 shoot up into the air, then another
 + another still. The whales were coming
 in our direction and soon we were
 right among them. I stationed
 myself in the bow beside the harpoon
 gun with camera in hand waited
 the reappearance of one which
 had gone down. In the far side
 of bow I saw the long smooth "lick
 of green water which showed that
 the whale was coming + ~~before~~ before
 I could swing my camera in
 that direction the huge animal
 burst from the water sending a
 column of ~~up~~ spray high into
 the air. He was down again
 in a second, but the Captain
 said "watch the starboard bow Sir
 he'll come up there I think" - Hark
 had the words left his mouth when
 a cloud of spray was sent into
 our very faces as the whale blew
 right under the bow. Swinging my
 camera about I pressed the button
 just before the crash of the harpoon gun
 sounded, and turning his flukes

high into the air the whale went down
 dragging the heavy line behind it. At an-
 other instant a muffled roar was heard
 in the water then the line hung straight
 down from the bows - The hauler had
 exploded & the whale was dead with
 barely a fight for life. Then began the
 slow steady pull by the steam winch
 hoisting the whale to the surface -
 when it appeared at the steamer's side
 a chain was made fast to the flukes
 of the whale hoisted tail foremost
 up on vessel's side. Two men then
 with long handled whale spades set to
 work to cut ~~the~~ off the flukes, for as
 they yield little oil & are an awkward
 thing to handle they are seldom sent
 in to the factory. First one fluke was
 severed & then the other and dropped
 off into the water as food for the
 sharks. Already two other sailors were
 at work with the air tube & soon the
~~was~~ long sharp pointed & black cany
 ing the tube was jabbed well down into
 the whales side. The signal to turn on the
 air was given, & the whale was slowly
 filled with air - a spear pointed
 shaft with a flag at the end was
 then pushed into the animals side,
 the chains let go & the carcass sprang

We picked up at the end of the days
 hunting. By this time the whales had gathered
 together & were all around us - on every
 side, afloat & afloat shot into the air &
 the water was white with foam from the
 lashing flukes - Once I saw two monsters
 apparently standing on their heads in
 the water, turning their tails from side
 to side as if in play. Again a big fellow
 rose on the port side, no doubt ~~within~~ the
 beside the steamer that the gun could not
 be turned down, and blew in our very faces.
 A lurch of the vessel threw me off my
 feet just as he was coming to the
 surface, but scrambling to my knees
 I snapped my camera just before he
 went down catching him with the
 blowholes still distended. His line
 was only a short one & as the steamer
 was swinging about he came up right
 under the bow. "Look out" yelled the
 captain, and ~~at the~~ with the words
 came the crashing roar of the
 gun; the whale threw his flukes
 high in the air striking them
 as thin he would throw off the sturgeon
 barrow, turned back downward &
 level. The huge lines ^{over} ~~the~~ the
 rollers as far as after ~~the~~ ~~was~~
~~was~~ out with the ~~rough~~ terrific rush

of the whale; "we'll have to stop him" said
 the Captain, "or he'll take all our line -
 I hit him too far back". The bridle of the
 line was set, ~~slowly~~ lightly at first
 then harder & harder, and the line
 tightened till it seemed as tho' ~~the~~
 the strands would part. As the whale
 was checked in this rush, the steamer
 dipped forward, & was tossed with
 tremendous speed thru' the water. How-
 ever the great strain soon began to
 tell on the strength of the whale, he slack-
 ened his speed & almost stopped. "Full
 speed on the wind" said the Captain
 & as the line recoiled ~~in~~ the whale
 was drawn slowly toward the boat.
 He was blowing continually now,
 the spray of his spout tinged with
 red & now there a great mass of
 blood oozing from out his spout-
 holes. "He's almost done for" said
 the Captain, "we can land him
 from the bow"

At the top of the page, the number 21 is written in the right margin. The main body of the page contains faint, handwritten text that is mostly illegible due to fading. The text appears to be organized into several lines, possibly representing a list or a series of notes. Some words are difficult to decipher, but they seem to include terms like "page 2", "page 1", and "page 3". The handwriting is cursive and somewhat slanted. The overall appearance is that of an old, used notebook page.

No. 37 Sulfurbottom ♂ July 6-08 Kyrgyz + B.C.
Color Top of head back to opposite insertion
 of fins clear slate blue (not so dark as usual)
 on sides of back just above fins & forward
 to a little beyond eye is an almost solid
 area of very light blue gray - from ~~eye~~ eye to
 ear this area is very narrow & triangular
 on both & upper sides to a point opposite the
 pectorals there is much more light color
 than dark - it is broken by the darker
 blue gray in only a few places - from
 pectorals to flukes sides of peduncle has more
~~light~~ ^{dark} color than ~~dark~~ light - the light
 markings are heaviest on the upper sides
 of the peduncle - from anus to flukes
 the lower edge of the peduncle & a little
 way up on the sides is flecked & dotted
 with fine light markings - navel to anus
 mid-ventral line is clear gray un-
 marked - a white patch at navel -

Right ramus of mandible & chin blue-
gray - sides of throat & across to median
 line is slate which extends backward
 nearly to the insertion of the fins -
 This makes a rather narrow dark band
 or color around the throat of the whale -
 from fins back, lower sides, breast
 & belly are blue gray - throat & breast
 quite thickly marked with ^{very} light gray
 flecks - from fin running diagonally

downward + backward is a thick line of white markings nearly to mid-ventral line - the white markings are mixed with light gray areas - pennis dark brownish gray at base - distally slate blue.

Pectorals Below white with a light gray patch at insertion - Above tip + ant edge of dorsal third are white - rest of fin above slate -

Below 4 barbles + roof of mouth deep blue black. inside both ramie have upper half slate - lower bluish white - tongue blue slate.

Notch of pectorals 18 deep + 26 wide at top ✓

Osteology

18 chevrons (none) - 1st chevron is small & represented by only the right lamina this however is solid bone - no sign of the left. The 5th chevron is both the highest + broadest distally of the series - 4th is almost as high as 5th but much narrower distally - 15 per. of ribs

Cy D₁₅ L₁₅ Ca₂₉ = 66 (see)

The terminal caudal is the size of a vert but fully ossified -

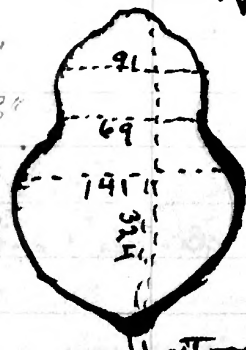
1 - 2020	10 - 10	27 - 103
2 - 905	11 - 105	28 - 58
3 - 423	12 - 595	29 - 8
4 - 528	13 - 733	31 - 32
5 - 356	14 - 915	33 - 18
6 - 670(?)	16 - 463	34 - 148
7 - 1560	18 - 319	35 - 330
8 - 110	20 - 74	41 - 190
9 - 19	21 - 17	42 - 42
	23 - 106	43 - 34

No 42 ♂ Sperm July 18-'08 Kyrgyz B.C.

Color Top + sides of head, back + sides to flukes, all dark chocolate - The upper lips for about 2 feet from edges up the sides of the head are white - the white grades into the dark of the head gradually, the gradations being light chocolate, ^{speckled with white} - The lower jaw is white on the sides with a few very ^{very} narrow chocolate dashes - below (under) the dashes are so thick that the white is excluded except in a few places - the white extends back to a little beyond the corner of the mouth following each ram of the mandible as they begin to curve outward from the symphysis - the dark of the throat runs up in a triangle between the proximal ends of the mandible - from the ^{anterior} ~~distal~~ end of the mouth to the tip of the snout in the superior median line is a rather narrow, irregular band of white, streaked with broken lines of ~~the~~ light chocolate - these lines ^{curve} ~~radiate~~ outward + backward on either side of the median line of the snout - Below the belly is dark chocolate like the ^{back} ~~vent~~ except at navel - here there is a large solid pure white patch; this patch sends arms outward + backward which surround the penis - the white of the arms grades off on the sides + at the ends into gray

Head & Snout - The head is oblong & square ended - ~~the~~ edges round off gradually at the end of the snout - ~~proportionally~~ the sides of the head swell out to ~~the~~ the eye. On the top, from the base of the skull to the snout the outline is very slightly concave - that is the base of the skull & the snout are a trifle higher than the central portion - The snout in the center is 141 wide; it is 324 deep & the width of the upper portion of the snout is 91

A little above the center of the snout two deep ~~concave~~ wide depressions run backward & downward - the width of the snout between the ends of these depressions is 69 - The depressions mark the anterior half of the spermacete "case", & become narrower & shallower as they go backward, finally being lost ^(center) ~~on the~~ On the very top of the snout, there is a low rounded eminence, on the left side of which ^{is} the blowhole - A cross section of the snout looks like this



119 cent. from the corner of the mouth forwards ^{to the tip} there is on both sides of the upper lip a marked transverse depression or groove about 6 or 8 inches long.

In the very center of the top of snout is a shallow depression running

from opposite the posterior end of the blow-hole forward almost to tip - "

The diameter at eyes which is the ~~thinnest~~ ^{point} point of the whale is 273 ~~mm~~ (height)

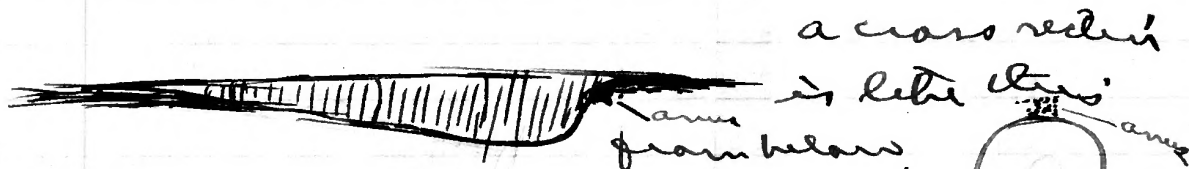
The whole head is smooth ^{point} a little back of eye on top & just to eye on sides. The rest of the body is covered with wavy broken ridges running nearly parallel - on the upper sides ^{the long axis of} these ridges are directed obliquely ^{on both long axes run far off} ~~inferior~~ - ridges are most prominent ^{between the eye & anus} ~~between the eye & anus~~. On the belly, ^{the ridges are very prominent but are further apart - a low ventral median ridge runs forward from anus to a point nearly opposite the insertion of the pectoral, where it is lost.}

On the top edge of the peduncle from the hump to the flukes are many knobs & crenulations, such as are found on the humpback only more prominent & irregular -

There are two creases on either side a little behind the penis insertion

On lower edge of peduncle, from the posterior edge of the anus a great rounded hump rises abruptly. This hump swells outward abruptly just behind anus; it is bordered on either side by a deep depression; the hump is highest a

little way behind the anus & becomes lost near the flukes - it looks like this (side view)




Gular Folds

There are 7 well marked creases on the throat & between the ram of the mandible. ^{proximally} These creases are of varying depth & ~~also~~ lengths, some being ~~well~~ much more marked than others; they all run fore & aft; they cover an area 135 long & only four of these creases are 3 in. deep - rest all ^{very} shallow - Hump. The hump is an evenly rounded eminence 24 high; it looks like this:-

Blowhole Measures (straight) 36

" (curved) 57

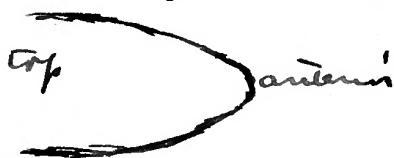
The blowhole is curved like this  It is on the left side of the tip of snout; its center is 86 above the center of the longitudinal depression marking the case. At the side of the blowhole rises the low rounded eminence marking the extreme summit of the snout.

Blubber On side of head blubber is very thin - only 8 thick - between the pectorals it is 22 thick - on side of the peduncle it is 14 thick. Blubber is very hard & tough - it was hard to flense the whale -

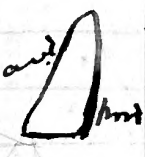
"Case" The longitudinal depression on either side of the upper ^{third} half by the snout marks the anterior portion of the spermaceti' case. The case occupies the whole upper third of the head, & extends from the tip of the snout back to back nearly to a point opposite the eye - the case narrows gradually from back to front & is entirely covered by sinews about 1 cent. wide which run longitudinally. These sinew-rope are many layers deep & not stretched very tightly. The method of opening the case was to strip off the sinew-rope until nearly the bottom layer had been reached. Then a trough was laid having one end at the head & the other in the tank. The "~~head end~~" was. The case was then plugged by a whale-knife & the oil started to run out - The spermaceti' was thin enough to run freely - & the case contained all this jelly-like masses in with the free oil - these masses were poked out with the knife. When all the oil had run out which could be gotten from the one incision the cut was made larger & the oil & jelly-like masses, run & bailed out from the remainder of the case.

The jelly-like masses were all there the whole case in with the oil, but could be taken out in great lumps with the spermaceti'. The following measurements of the case were taken after it had been opened, so I could determine exactly the whole extent - The spermaceti length of case cavity = 5'80 congeals when Dipped (up & down) " = 14'51 cool air thickens it & looks then like paraffine - only not so hard - Fifteen barrels of pure spermaceti' were taken from out the case alone - the spermaceti' yielded from the whole head ~~that~~ was 40 barrels (including that in case & all that was taken from the fat on the head) The whole whale yielded 90 barrels of oil - including that ~~the~~ taken from the bone, meat, blubber & spermaceti'.

The case from above looks like this:



The epidermis peels off very easily; it is in several layers. The dermis also can be stripped off with little trouble but is soft & very easily pulled apart.

Flukes One lobe of the flukes when cut off & set up in isobare looks like this -  is clearly an acute triangle. The anterior edge is almost straight except just in front of insertion where it is slightly convex. At the extreme tip the ant. edge curves to meet the post. & the two edges form a blunt tip. The posterior edge is very slightly & evenly convex from tip to beginning of notch - the post. edge is 8 mil. thick - it is about the same thickness for its whole extent. The notch is deep & the post. edges curve inward abnormally to form it - the edges overlap - The notch is 42 cent. deep - The thickest part of the flukes is 41 from the ant. edge - it is 20 thick here. This cross section (which is near the insertion) is 138 in ant-post. diameter, 70 cent. from ant. edge fluke is 20 thick - The greatest ^{length} ant-post of the flukes is 161 -

The flukes above & below are dark chocolate like back. There are two small grayish patches near the insertion on the superior surface.

Pectorals Above & below like back - dark chocolate

Right - Tip to head of humerus = 148
(width greatest) = 86

Left (tip to head humerus) = 148
 " breadth (greatest) = 81

Osteology

Skull

Length 560

Breadth 220

Jaw

Length (straight) = 490

" (axially) = 500

" symphysis = 304

Depth proximally of left ramus (greatest) ^{straight} = 60

25 teeth right side

24 " left "

Ribs

10 ribs right side

" " left " - the extra rib on the left side is only 1 foot long.

Chevrons

13 chevrons present - 1st is very small + free distally - no spine - 2nd is very high + has a spine 89 long + 17 wide distally. - 3rd is highest of the series - its spine is 43 long + 22 wide distally. The 3rd is only a little higher in the series than no 2 as it stands in position. The spine of the 4th is 39 long + 27 wide - like other whales, the chevrons decrease in height + increase in distal breadth as they go backward in

the series

Vertebrae C₇ D₁₀ L₉ Ca₂₃ : 49 Sura

I do not count the vertebra bearing the rudimentary rib on the left side as a dorsal.

Possibly 24 caudals might be counted for the last vertebra is composed of certainly two, possibly three, ankylosed bodies - it is a triangular block showing the ankylosis of two bodies very distinctly. I am of the opinion that the extreme end (which is about the size of a hazel nut) is a separate vertebra, such as is often found in other whales, but have not counted it as such. The end of the last vertebra is 10 cent from the bottom of notching flukes.

Pectoral I dissected this flipper very carefully; Left ^{Tip of largest digit} _{is 14 1/2} - the last phalanx extend clear to the edge of the flipper.

Metacarpals = 4 - The metacarpal of the last (4th) digit is forked proximally the actual fork being composed of two portions connected by cartilage - The ungiform process from the side of the carpus is an oblong bone 80 mm long.

The formula for the phalanges is
 $I_2 II_4 III_3 IV_{31}$ & like as the 1st digit
 the others have next the proximal base.
 Digits 2-3-4 have a very small terminal
 phalanx - only 20 mil long on digit 4
 The space between the phalanges, which
 is filled with cartilage, diminishes
 somewhat distally - between the
 4th metacarpal & the 1st phalanx of
 that digit it is 25 mil.

There are 5 carpal ossifications -
 three in the distal row & 2 proximally

Humerus
Radius
Ulna

The radius & ulna are both firmly
 ankylosed to the distal end of the
 humerus - so firmly that the end of
 either bone can not be determined
 accurately - the ones given below
 are as nearly as possible correct
 lengths humerus

245.0 mil

" radius

= 320

" ulna

= 270

Breadth radius distally = 190 (64)

" ulna "

= 200 "

The ulna has a very well marked ole-
 cranon process - this is 110 mil. long
 & 130 mil broad at distal end.

Scapula Left (?) External surface is deeply
 concave - The spine & pectoral
 fossa are indistinct -
 The suprascapular edge is irregular

convex - at the coracoid border, and -
usually, it stops abruptly.

The acromion is long & expanded distally
being much. The coracoid is long rather
slender & expanded distally.

Height = 810 mil.

Breadth = 690 "


" glenoid fossa = 200 "

Length acromion = 340 "

Breadth " distally = 260

Length coracoid = 220

Breadth distally = 85

1st Rib The first rib is heavy & strongly curved
distally a cross-section looks like
this  - it is somewhat flattened
proximally; it has a large heavy
tubercle & a short thin neck ending
in a blunt point which may be called
the head.

Length (straight distal end to center of tub) ¹¹²⁰ ~~1000~~

" curved " " = 1300

Breadth proximally = 240

" distally = 310

Sternum The sternum is irregularly tri-
angular in shape, with the point
downward where in position. It is
composed of at least two subglared por-
tions - possibly more. In the center of
the upper portion there is a large
oval opening - the center of the sternum

is greatly thickened & the whole lower portion is rugose - the distal end is square - the outer surface is convex the inner concave. There seem to be articulations ~~for~~ surfaces for four ribs - however this can not be determined exactly.

Length of sternum = 1260 mil.

Breadth (above) = 1120 "

" (below) = 160 "

Thickness in center = 250 "

Length of opening upper half = 250 "

The stomach contained remains of a shark ^{or fish} ~~over~~ five feet long & a great number of cuttlefish heads, together with ~~the~~ parts of the body of several large squid.

1 - 1830	21 - 24	ant-post. length of hump = 111
2 - 1140	22 - 478	notch of flukes = 42 deep
3 - 570	23 - 125	snout to corner of mouth = 510
4 - 630	24 - 253	pin's sheath (crease) = 88
5 - 70	25 - 251	greatest ant. post. breadth of flukes is 2161
6 - 810	26 - 28	width of peduncle at flukes insertion is 510
7 - 1255	27 - 108	
12 - 470	29 - 36	
13 - 605	33 - 40	
15 - 750	34 - 200	
16 - 550	35 - 222	
17 - 1040	41 - 240	
18 - 148	43 - 7	
19 - 78	no. of teeth right = 25	
20 - 81	" " left = 24	
	tip of snout to tip of lower jaw = 140	

Finback (Very young)

no 38 ♀ July 6-08 Kyngard B. C.

This whale had not been blown up and consequently lay at the buoy under water all night. When hauled out on the ship the next day the whole breast & belly was almost completely eaten away by sharks so that it was impossible to get color or external details of this part.

Color Top of head left side dark slate - edge of ~~rostrum~~ ^{right} side is light ^{blue} gray. Back & upper sides to dorsal fin is dark slate - sides of peduncle from dorsal back & flukes is light blue gray - ~~color~~ going backward from d. fin the blue gray ^{of the side} comes farther & further down toward median line ^{flap} but never quite reaching it. Left ramus dark slate like head. Right ramus light blue gray as is right side throat - Central portion of body from chin to flukes white - the white gets narrower & narrower in median line as it goes backward. The lower half of sides from fin to anus, white. On sides of throat from corner of mouth back bottoms of furrows are dark & folds are blue white. Rest of furrows on breast & back are white like folds - Sides of peduncle have same "knot-like" markings as were found on no. 34

Pectorals Above ground color is same as back - ant. edge white - above fin is diagonally streaked with fine lighter lines not quite touching posterior edge. Below fin is cream white - ~~ant. edge~~ ~~fin~~ proximally fin is lined with light gray



Dorsal Fin is just like no 34 (see plate)

Tongue above slate blue - below salmon color

Flukes ^{has the central portion} Below, very light pink mottled with bluish - The tip ant. & post. edges are slate lined with lighter color for about 6 inches from edges

Baleen - white portion right side is 7/8 long
Pustles white except very part. part where they are all light gray

Iride left ramus white - right slate
This finback was not blown up at all

Osteology no 38

1-1340
 2-1340
 3-1340

15 pro ribs

1st. chevron small + not joined distally

but complete - 2nd. high - 3rd a little lower than 2nd + 4th + 5th same height as 2nd others get smaller gradually - there were 16 chevrons in the series & it

looks like this in position

11 21 13 14 15 16 17 18

Vertebrae C₇ D₁₅ L₁₅ Ca₂₂ = 63 sure

Skull Length straight = 311
Breadth (squarish) = 155

Jaw Length straight = 306
" curved = 315

1 = 1360	12 - 405	24 - 150
2 = 560	13 - 450	25 - 152
3 - 262	15 - 650	26 - 16
4 - 326	16 - 360	27 - 70
5 - 225	17 - 924	28 - 26
6 - 440	18 - 167	29 - 25
7 - 980	19 - 162	30 - 5
8 - 63	20 - 36	31 - 17
9 - 6	21 - 27	32 - 13
10 - 3	22 - 280	33 - 257
	23 - 70	34 - 58
		41 - 130
		42 - 21

Humpback Calf No 39 - ♀ July 11-08 - Kyrgyzst B.C.

Color - Considerable white in streaks on median line of throat + breast + fins - white spot between fins - many heavy white spots + circles on right pinnas "pepper + salt" from nucha to flukes - back top of head + sides black - ~~the~~

Hump of dorsal fin is 86^{ant.} in ant. post. length - back slightly crenulated - Blubber very fat Bristles of baleen mostly dark gray - ant. portion of ~~the~~ the narrow

longitudinal central band are light gray.

1 - 870	11 - 1.8	23 - 81
2 - 560	12 - 235	26 - 18
3 - 198	13 - 258	27 - 65
4 - 237	14 - 267	33 28 - 6
5 - 184	15 - 400	34 - 72
6 - 320	16 - 297	35 - 164
7 - 573	17 - 570	36 - 12
8 - 43	18 - 234	37 - 13
9 - 15	19 - 265	38 - 191
10 - 7	20 - 74	39 - 58
	21 - 14	40 - 103

42 - 26
43 - 18



Squalus bairdii

No 110 ♂ July 13-08 Kyquart B.C.

A light whale - top of head to ear dark slate - from ear to pectoral back + upper sides all solid light blue-gray - lower sides from tip of pectoral laid back to dorsal fin is light blue gray marked with darker gray - from dorsal back to pectoral, the whole of the peduncle except the very top + bottom edges are solid light color - the upper + lower edges are darker gray - Below chin lip + throat to opposite eye are slate like head - from eye to navel a blue gray - the furrows on this part are marked with many dove colored markings occasionally a white one is thrown in but mostly dove colored - spots of dove sides come down + meet between navel + penis - a little white about penis to anus on ventral line of body; also a number of places where the markings are thickest on the folds, just below

+ back of fin, the bottoms of the furrows are pink in spots.


Pectoral Left below white with a very few grayish markings on distal third. Above gray brown at insertion then slate & distally whitish - ant. & post. edges ~~dark~~ of distal third is whitish.

Furrows above color of peduncle marked with white lines - below slate like head with a few lighter lines in one or two patches.


Dorsal fin Sides for whole ^{ant. post.} length at base are white shading into darker at upper half - tip slate.



Pectoral Right above like left - below white - on the proximal half in the median line ~~is~~ the median line are two large masses or spots of fine gray lines

Inside each ramus have  the upper halves bluish-white & lower half slate!

Baleen + roof of mouth black - bristles very thick - tongue blue-slate -

28 pairs of symphyses 7 on left side
Top of head - 18 mm to baleen (1) The lobe of the flukes of this whale is a triangle 
the ant-edge is straight & the posterior slants rapidly toward the tip to meet the anterior.

Osteology

18 1/2 chevrons in series - 4th chevron highest

5th almost as high - 1st free entirely

1 2 3 4 5 6 7 8

the last chevron is represented by only one lamina on the right side

C 7 D 14 L 16 Ca 28 = 631 sure

14 pres. ribs - the last short faint white is usually faint & does lacking ~~pieces~~; the last pair of this whale were long.

Skull Length: 545 cent
Breadth: 200 "

Jaw straight = 520 "
curved = 545 "

Scapula Left Height = 875 mil
Breadth = 1370 "

" glenoid fossa = 320 mil

Length acromion (median) = 440 "

" " (lower edge) = 450 "

" coracoid " " = 180 "

The suprascapular border is flattened in the central portion & dips sharply posteriorly to the glenoid edge. Anteriorly the dip to the coracoid edge is gradual. The ridges radiating upward from the bottom on the inner surface are indistinct except for one or two. The outer surface presents two great cavities on either side of a vertical median ridge - here the scapula is so thin that the light shows thru. The acromion projects downward slightly & is strongly curved inward. The coracoid projects strongly inward & downward.

NO. 43 ♂ July 18-08 Kyuguet B.C. Sulphurbottom
Color Head slate - back & upper sides to
 flukes almost solid light blue-gray broken
 in any one or two ~~places~~ small patches
 by the darker gray - All the peduncle is
 light color excepting a few darker markings
 near ventral line. Many white flecks
 & spots on folds of sides of belly from in-
 sertion of fin backward diagonally to
 navel - white spot on navel - the white
 markings are mixed with gray - only
 one or two reach the mid-ventral line.

Fins below white - above slate with
 many of the light body markings
 for whole length of fin
Flukes below very light gray lined with
 white - in the central portion of the
 distal $\frac{1}{3}$ the white ~~lines~~ predominates.

1 - 2385-
 2 - 1010
 3 - 510
 4 - 635-
 5 - 460
 6 - 805
 7 - 1810
 8 - 128
 9 - 13
 10 - 11
 11 - 1
 12 - 6510

13 - 815
 15 - 1050
 21 - 19
 27 - 116
 42 - 39

no. 44 ♂ July 20-'08 Kyrgyz B. C. Dufhurbottom


Color Head to eye light slate - eye to ear small fine spots of light - ear to flukes back & upper sides almost solid light bluegray - only a few darker markings - Throat light slate like head - from fin insertion back are many dove colored markings on folds with narrow then a white one (one or two of these dove colored ones on throat)

The markings on folds seem to take 2 distinct areas - one from root of fin downward & backward along reaching the median line - the 2nd from opposite the tip of the fin downward & backward along edges of the folds to navel - spots do not quite meet between navel & peria - There are many of the "knot" like markings on this whole ^{all the peduncle to toward to off. navel} same as those on the Finbacks. Lower sides of peduncle are like upper only having a very few darker markings near ventral line - white patch on navel - 5 lines

Pectoral Right below is white - many fine gray markings on the distal half - above all dark slate with a few of the gray body markings. Tip seems to have been injured - it is very ~~thin~~ narrow & sharply recurved. Left fin is like right

Flukes Above light slate like head finely washed & lined with broken light gray - post edge dark slate - Below flukes are white

so thickly lined with gray as to give the whole general effect as light gray - the post edge is solid light blue gray - the tips of both lobes have been injured & are irregular - look as tho' they had been chewed off.

Dorsal fin is white at anterior base & sides - farther back the white shades to grayish & then to slate at tip - the whole fin is lined with fine lines like this - tip is solid color & unlined  and - post length of dorsal is 78 (as can be determined) The light lines start on the very center of the anterior edge & sweep upward & backward on either side from the median line
Pectoral length = 188 Circumference at base = 91
Fin creases run out of corners of mouth
Center of eye is 274 from ant. insertion of fin - The end of the longest crease which runs up on left ramus is 185 from anterior end of eye

1 - 2325	15 - 1028	39 - 120
2 - 1000	16 - 535	41 - 214
3 - 520	17 - 1520	42 - 44
4 - 642	18 - 364	43 - 66
5 - 475	20 - 80	
6 - 810	21 - 21	
7 - 1790	22 - 540	
8 - 137	24 - 265	
9 - 22	26 - 275	
10 - 10	27 - 118	
11 - 1	33 - 19	
12 - 650	35 - 373	
13 - 800	38 - 500	

Leaving Rupert B.C. on July 24 I proceeded
 by boat to Alberni B.C. which is in the center
 of Vancouver Is. Since I reached Alberni
 in the evening it was necessary to
 stay all night there, & in the morning
 in company with a young travelling sales-
 man, I took an auto for Nanaimo a
 distance of 60 miles. The ride is, and
 is the most beautiful I have ever taken.
 The road winds in & out among mag-
 nificent fir trees, which reach a height
 of 200 feet in many places, gradually
 ascending meanwhile till near Summit
 Lake it is over 500 feet above sea
 level. I reached Nanaimo at 8:15 ^{p.m.} just
 in time to catch the train for Victoria
 arriving there at 6:20 p.m. After spending
 a few days getting my stuff packed &
 shipping negatives & specimens to New
 York, I left Victoria for Seattle on Aug.
~~24~~ 30 I spent the day & night in Seattle
 leaving at noon on Aug 1st, Saturday
 for Juneau, Alaska, on board the S. S.
 "City of Seattle". I met several college
 fellows with their wives, mostly mining
 engineers, bound for Alaska ports, &
 we formed a gilly party. We touched
 at Prince Rupert B.C., Fort Wrangel, Alaska,
 Ketchikan, Petersburg, Douglas City,
 Deadwell, & reached Juneau at 9:30 on

the morning of Aug 4th. Fortunately I found that Mr. Street was in town, & I soon found him. We lunched together, & then ran over to Tredegar in the lands, where we had a chance to go thru the famous mining works. ~~The evening we spent pleasantly at~~ The afternoon was half gone when we returned, & I called on Gov. Hoggard at four o'clock. The Governor is a very pleasant man, & after an hours call I went back to the hotel, for dinner. The evening Mr. Street & I spent pleasantly at the home of Judge Folsom of Juneau.

On the next morning at 3 P. M. we left for the whaling station at the south end of Admiralty Is. in Murdock's Car. The day was cold & rainy & in the evening a heavy fog settled down. As usual a part of the engine broke & we were delayed several hours when we were just fifty miles from the station. We finally got under way but had a hard time as the wind from the floating icebergs was cutting & the rain & fog cold. However after considerable difficulty we got to the station at 11.30 P. M. & were soon

hanging a lunch.

North Finback ♀ Aug. 8-'08 Tyee, Alaska

above Top of head, left side & back & upper sides to flukes is neutral tint - upper sides back as far as opposite vulva are like back, grading into the white of ~~lower side~~ belly gradually - The sides of the peduncle shade from the neutral tint of the mid dorsal region into a light gray with a shade of bluish in it

Below white left side, from snout to navel dark - the upper portion of the left side has both folds & furrows dark slate - the lower half to mid-ventral line has folds light slate & furrows dark.

The gray of the sides of the ~~peduncle~~ comes down farther & farther toward the mid ventral line as the flukes are approached, till so that from anus to flukes only a narrow band of white two or three inches wide is left on the very mid-ventral line. From insertion of fin & a line backward, two white arms extend downward & backward to shade of belly - not very distinct - A band of the light gray of the sides, about three feet wide, runs from across belly - the post. edge of band is at navel - the band in the very central line is whitish - From navel to anus the belly is pure white - Right side edge of rostrum is blue gray grading into darker

up to median line, (but not so dark as on left side). This lighter slate extends back as far as opposite eye - it then grades into the neutral tint of the back. From corner of mouth to tip right ramus is light blue gray - the folds of all upper half of right ~~side~~ ^{right} blue gray + fawns ~~black~~ - slate - the lower half of right side has folds pure white + fawns ~~black~~ - flesh pink. This white of the folds extend way ~~back~~ back to the gray band across belly in front of navel.

Pectorals Below white lined with fine black gray in no regular pattern - Above dark slate like head - ant. edge white.

Flukes Above color of back - below white in central portion finely lined with bluish gray running ant-post + curving inward like those on Squalus bottom tail - both ant- + post. edge + a little way toward center below is slate blue -

Panque is light purple below + slate blue above - inside left ramus has upper half light gray + lower half white -

Baleen - Bristles of baleen are ~~very~~ dirty white - white portion of right side is 93 long - there are 114 plates in white portion. Baleen ~~begin~~ 19 from snout

Dorsal Fin is slate like back - dorsal + pectorate like others.

"Same" knot-like markings on sides as

gray - throat, breast + belly from mid-ventral line to level with fin is white - furrows all dark from fin half way to central line of body - rest of furrows to center line are flesh color - the only dark folds on this side are from fin to corner of mouth + four or five folds down. The ~~whole~~ gray of the upper sides comes down from ~~from~~ to a line drawn from tip of fin laid back to opposite anus - below this line all is pure white - From anus back to flukes the blue gray of the sides of peduncle comes down except just in median line. Peduncle + side has "kurt like" markings.

Flukes like head above - below all white except for narrow margins of slate at both edges.

External Characters 21 white hairs in 2 vertical rows on symphyria like on S. sulphur bottom - 8 hairs left side top of head from opposite blow hole to snout - center of eye is 22 behind corner of mouth (mouth pinched wide open)

1 - 1700
2 - 795
3 - 340
4 - 420
5 - 304
6 - 355
8 - 79
9 - 12
10 - 9
11 - 2
12 - 470
13 - 600
15 - 765

16 - 415
17 - 1136
19 - 177
20 - 50
21 - 351
23 - 81
26 - 20
27 - 82
28 - 40
29 - 40
30 - 5
31 - 24
33 - 25

41 - 148
42 - 26
43 - 68
Length fin (tip to post anus) = 138
Depth notch of flukes = 16

no. 47 ♀ Aug. 10 Tyee, Alaska Finback


Color Right side top of head is light slate grading into white on ant. edge - light slate color extends back as far as opposite eye + down to eye; up to blowholes - rest of back + sides above level of fin ^{to dorsal fin} ~~back of fin~~ ~~off white~~ is all white is neutral or slate color - fin dorsal to flukes top of peduncle is same color - sides below level of fin from its insertion back to vulva is pure white like belly - from vulva back the sides of the peduncle are gray shading into the white of the median line - Right ramus white at tip, shading back into very light gray - the edge of lip is slate. Seven folds from fin downward are light slate + furrows dark - rest of folds to mid ventral line are white partly with dark furrows + partly white furrows - 20 ^{furrows} ~~furrows~~ altogether from fin down are dark. The arms of white are well marked. Left side has top of head neutral like back - ramus + lips neutral. The furrows of the entire left side to mid ventral line are dark - Thirteen folds from fin down are slate - the remainder shade from slate to pure white near cerata - white "arms" well marked. Many "bottle" markings on sides + peduncle.

Pectoral Left below is white for the proximal $\frac{2}{3}$ distal $\frac{1}{3}$ (except ant. edge) is dark gray lined

with lighter. Above fin is like back - 6 shallow
creases run up over fin at base $\frac{1}{3}$ ~~that~~ way to
ant. edge.

Flukes above slate - below white in central
portion - wide margin posteriorly below is
slate gray - narrow margin of anterior
edge is gray.

Dorsal fin is slate like back - very high

 5 falcate & notched
29 hairs 2 ant. long on symphyses
in two vertical rows almost parallel
like this () - The posterior end of scapula
lies lower than anterior end when in
position - The under edge of the rostrum
right side is pure white for the length of
white portion of balen - rest is slate.

1-2010
2-830
3-420
4-518
5-380
6-705
7-1550
8-99
9-13
10-9
11-10
12-550
13-560
14-600
15-910
16-460
17-1360
18-176
19-651
20-435
21-924
23-924

26-24
27-104
33-15-
36-43
37-32
41-180
42-40
43-56

Length white portion of balen = 116

Depth notch of flukes = 20

Length of chin (from lower edge symphyses) = 89

Tip of snout to beginning of balen = 18

Pectoral tip to ant. insertion = 248 (exact for
fin was pulled out at right angle
to body)

No 48 Humpback ♀ Aug 11-08 Tyee Alaska

This whale contained a foetus 157 long
Color Top of head back sides + belly black - belly has
 a few fine white specks - sides of throat + breast
 black - in median line there are streaks
 + splashes of white running to a little back
 of fins - the same spots between fins
 as in others - a few circles on chin + left
 ramus - Flukes below black at insertion
 + rest white flecked + dotted with white.

1 - 1410	13 - 365	20 - 7
3 - 340	14 - 380	31 - 32
5 - 270	15 - 575	33 - 7
6 - 535	19 - 429	34 - 126
7 - 930	20 - 114	36 - 18
8 - 63	21 - 25	37 - 34
9 - 19	23 - 104	43 - 24
10 - 9	26 - 23	
11 - 03	28 - 59	Depth notch of flukes = 26
12 - 340	29 - 59	

No 49 Finback ♀ Aug 14-08 Tyee Alaska

Color Right Top of head, right side, ~~very~~ light
 slate gray - this light color extends up
 as far as blowholes, backward to opposite
 ear + then downward + backward to the
 region immediately above fin + for whole
 length of fin itself. A very narrow ^{irregular}
 band of dark (neutral tint) runs forward
 + downward from center of back mid-
 dorsal region to eye - All back + upper
 sides to the level of fin + as far back
 as tip of fin (hind back) are neutral tint
~~From~~ Rest of back to flukes is light slate,

which grades into light French gray on the sides. Right ramus white except near corner of mouth where it grades into light bluish gray - all of the folds between the fins right side are white + 17 furrows from fin root are dark - remaining furrows to mid-ventral line are pink - As far back as vulva the white of the belly extends up sides as far as the level of the fin; from vulva back to flukes the ~~whole~~ light French gray of the sides, comes further & further down gradually excluding the white except ^{near} ~~at~~ mid-ventral portion. There is a little more of this mid-ventral white than usual as the gray of the sides does not come down so far as on the other Finches I have seen. All over the peduncle are many of the usual "spot-like" markings.

Left side top of head is neutral tint - back + ~~upper~~ upper parts to flukes like right side. Left ramus neutral - side of trunk from symphysis back to insertion of fin has the ~~of~~ folds of the upper portion neutral shading into ^{the} white folds of the lower portion - All the furrows of this (left) side are dark except those on fore near the mid-ventral line which are ~~dark~~ pink - From insertion of fin back all ~~folds~~ are white. Two prolongations of the gray of the upper

sides are bent down ^{backward} from a little back of fin insertion - since this whale has the whole breast between fins white the arms "opercles" are the dark color into the light & not the light into the dark as usual.

Pectoral 1st above is ventral fin - below white faintly shaded with blue at tip & posterior edge of anterior $\frac{1}{3}$

Right fin above partakes of the light color of the right side of head

Flukes below white except for a very narrow posterior edge of blue slate about 2 inches wide - on right lobe near posterior edge are a few dashes of blue-slate

External Characters dorsal fin is very falcate - it is like back in color (light ventral)



47 white hairs on nuchal region arranged in two parallel double rows at top which coalesce

at bottom & become scattered

Ballen white posterior 120 long - ballen soiled white

1-1901	12-540
2-900	13-570
3-3951	14-598
4-490	15-850
5-360	16-465
6-635	17-1280
7-1463	18-246
8-87	19-58
9-18	20-33
10-80	21-96
11-9	22-82
	23-51

29-48
30-6
31-25
34-107
36-40
37-31
38-390
39-851
41-159
42-39
43-68

length fin (post. vert. fin) 1751
Depth notch of flukes = 13

no. 508 Finback Aug 14-'08 Tyee, Alaska.

Color Left side top of head + back as far as end of fin (laid back) is neutral - rest of back + upper sides light ~~gray~~ slate - this color grades into light gray ~~below~~ ^{near} on sides - The gray of the sides ^{near} opposite ¹ comes down to within 79 of navel - rest of belly white. Left naves neutral + from symphysis to fin insertion, the upper half of throat is neutral - the lower half of throat has furrows dark to mid-ventral line + folds white - between the fins there are 20 dark furrows - the remainder to the mid-ventral line are flesh. The white "arms" are well marked + run as follows, breaking the gray of the sides; the anterior one runs from root of the fin downward + backward to a point about five feet in front of navel - the posterior one runs from tip of fin laid back to 2 feet in front of navel - The sides of the peduncle are thickly marked with light lines + "knot-like markings" - The white of the central portion of whale runs to the very tip of symphysis -

Right side of rostrum to + including fin is light - then narrow dark line running from back to eye ~~is~~ present - Right naves anteriorly white shading into very light gray posteriorly - Right side has upper half of folds very light gray - lower half folds white

furrows are ^{light} pink
 Flukes below white - post. edge (narrow) neutral
 anterior edge shaded with light gray -
 Pales - buccals white except posterior portion
 where they are gray -
 Roof of mouth light pink -

Osteology

15 pairs Ribs

15 chevrons - the 1st free distally, but arch-
 closed posteriorly, to the 2nd which is
 high - 4th is highest of the series -
 diameter of throat at "smaller" is 19

1 - 1660	12 - 428	28 - 44	Fin tip to post. vent. ion = 129. length white portion of belum = 121
2 - 365	13 - 565	29 - 39	
4 - 453	15 - 705	30 - 6	
5 - 318	16 - 430	31 - 23	
6 - 570	17 - 1070	38 - 378	
7 - 1290	18 - 214	39 - 74	
8 - 88	20 - 49	40 - 369	
9 - 13	23 - 70	41 - 187	
10 - 9	27 - 89	42 - 24	mouth closed w it is erect
11 - 1.5		43 - 74	

NO. 1 Finback ♂ Aug. 19 - '08 Tiger, Alaska

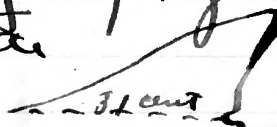
Color - Rostrum right side + right ~~anterior~~ fin
 (proximally) + side of back to ^{up} tip of fin (laid
 back) is light gray - the narrow band runs
 from mid-dorsal region forward + down-
 ward to eye - rest of back blue gray - Right ~~anterior~~
 white distally shading into light bluish (almost white)
 proximally - between fins the 1st fin fold (right
 side) are light gray + rest are white - 10 furrows
 are slate between fins (right side) rest to mid-ventral

line are flesh-colored - from corner of mouth to fin (right side) & folds are blue gray shading into white lower down - the two arcs or prolongations of light gray come down on the sides - the light gray of the peduncle on both sides comes down to within 45° of each other opposite anus.

Left side rostrum + back as far as tip of fin (land back) is light neutral rest of back to flukes gray shading into the light gray of the sides - peduncle is covered with the "hump-like" markings - Left ramus + upper half side of throat is light neutral - Eleven fields left side, below fin are gray + 8 furrows darkest of fields white + furrows flesh-colored - from symphysis the same number, but are darker than others between fins.

Pectorals ^{above} right, distally is ~~white~~ slate + proximally light gray like right side rostrum - Below ~~it~~ proximally white shaded with gray - distally light gray.

Dorsal fin slate

 (see original drawing)
& notched to base -

Flukes below for proximal $\frac{2}{3}$ are white except for the slate margins become wider in the distal portion wholly excluding the white in the distal $\frac{1}{3}$ ~~notched~~ & the tip is darker than all -

Baleen - bristles are solid white except in posterior portion where they are grayish
Eye pupil = 2 cent. in diameter
 iris = 4 " " "

Hairs 23 white hairs and 9 phrynia

1 - 1755	11 - 4	26 - 76	41 - 160
2 - 830	12 - 495	27 - 89	42 - 39
3 - 355	13 - 615	28 - 43	43 - 52
4 - 440	15 - 820	29 - 40	length of baleen = 106
5 - 325	16 - 406	30 - 4	" white part of baleen = 8
6 - 580	17 - 1200	31 - 30	93 plates in " " "
7 - 1360	18 - 234	33 - 30	Depth notch = 19
8 - 86	19 - 206	34 - 51	Snout beginning of
9 - 24	20 - 55	35 - 325	baleen = 16
10 - 10	21 - 26	35 - 325	Fin (tip to post. insertion) = 161

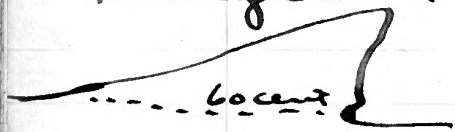
No 52 Finback ♀ Aug 19-'08 Tyee, Alaska.

Color Right side rostrum + upper sides to flukes are light gray - mid-dorsal region to flukes is ventral tint - a narrow line of ventral runs from mid-dorsal region opposite base of fin forward + downward to eye - upper surface of right fin light gray like head - from fin to pectoral the light gray of the upper sides comes down to a line with the fin + shades off into the white of the lower parts - from vulva to flukes the light gray comes down further + further toward the mid ventral line. Right narrows white distal half shading into light bluish gray proximally - from corner of mouth to fin 18 plates slate + 20 furrows

between fin all folds are white & 20 furrows dark - from insertion of fin & at tip the two dark areas are well marked

Left ramus & upper half of throat is neutral 1/2 dark folds between insertion of left fin & corner of mouth - all folds below fin are white - nearly all furrows to mid-ventral line are dark -

Dorsal fin is neutral tint & has post-marginal at base notched like No. 5



Underparts of whale all white & furrows flesh-colored

External Characters - 41 white hairs of apophysis 8 on right ramus about 10 inches apart & following curve of bone - 11 hairs right side top of head on the low ridge between edge of rostrum & median line - these last hairs are thickest just beside blowholes. The folds on the throat are 34 mil. in diameter; between fins 42 mil. in front of navel 70 mil. Navel is 22 cent. long

4 hairs left ramus

1 - 1860	11 - 7	23 - 95	36 - 39
3 - 385	12 - 575	26 - 18	37 - 28
4 - 474	13 - 535	27 - 89	41 - 170
5 - 342	14 - 570	28 - 50	43 - 74
6 - 628	15 - 860	30 - 7	
7 - 1450	16 - 420	31 - 28	
8 - 89	17 - 1245	33 - 22	
9 - 16	19 - 209	34 - 130	
10 - 10	20 - 36	35 - 345	

Length square surface = 110
Fin (tip to post. marg.) = 175

no 53 Timberlake ♂ Aug 20-08 Tiger Alaska

Color Right side rostrum & upper sides including fin gray - back (median line) is light neutral - Right ramus a very light gray (almost white) From corner of mouth to insertion of fin, nine folds are light gray & 16 furrows are slate - between fins to mid-ventral line four folds are gray & 16 furrows are slate - rest of folds to mid-ventral line are white & furrows flesh color -

Left ramus neutral & upper half of throat - folds & below fin to median ventral line all white & all furrows are dark except fine at mid-ventral line.

The usual "kitt like" markings are very plentiful all over the sides of this whole Great patches of brown shine all over sides & fin - this shine would give the impression of being frequent, ~~and~~ it is spread so evenly over the body - however the epidermis peels off & below the first layer the usual gray color is to be found.

Pectoral Right above light gray & below white shaded with gray.

Fishes below in central region are white - a narrow margin & the distal $\frac{1}{3}$ of pectorals are slate - above pectorals are neutral. Snout has been

measured & is blunt & square-ended

1-1730	11-3	29-45-	Length white portion of baleen row = 881
2-760	12-475-	30-51	
3-360	13-615-	31-28	
4-4551	15-790	33-20	
5-3251	16-403	35-3751	
6-570	17-1160	38-365-	
8-951	21-39	39-851	
9-18	27-90	41-155-	
10-8	28-451	42-35-	
		43-60	

No 54 Humpback ♀ Aug 20-'08 Tyee Alaska
contained a foetus about 12 inches long
(this was taken)

Color Back, top of head & sides black - belly is
black save for a few white flecks along
edges of folds - Left ramus has
only two or three circles ~~about the~~
on it - a few large circles & dashes
on the sides of throat anteriorly -
circles & dashes in median line
of chin throat & breast to pectorals -
(this median line of white is narrow)
The usual white spot ^{part. median of} opposite pectorals
in median line of breast - this white
spot lies mostly in the two furrows but
is very distinct

Pectorals Left above black with four
white circles - Right fin below white
with a narrow ^{posterior} margin of black 2 inch
wide - a little black at tip also.

Flukes below are black with a few narrow markings + bars of white - above black notch wide + shallow

Baleen - bristles have base + tips light brown posteriorly - anteriorly the tips are dirty gray as is central portion of baleen -

External Characters

Anterior insertion of fin is 125 behind corner of mouth

" " " " " 117 " eye

" " " " " 56 " ear


The ear is in a direct line from the posterior corner of eye to the anterior insertion of fin -

Hairs 27 hairs on top of symphysis - 14 tubercles on left ramus all bearing hair - 20 on left side top of head (counting center line) + all bear hair (on the center row of tubercles from blow hole to tip of snout there are ~~20~~ 37)

The distance between the tip of the snout + the tip of the lower jaw is great, but neither seem to have been injured - the chin is prominent

Folds on throat are 90 mil. wide; 140 mil. between fins; 170 mil wide in front of navel. The furrows are 4 cent. deep.

Dorsal fin is black



The pectoral fin of the 2nd "knot" is 19 in thickness

The inside roof of mouth is very light purple - base is slate blue.

There are a few of the "knot" like markings on the sides of this whale - The pectoral fin of this whale was extended at right angles to the body as measurements of length from tip to and 1 foot. incisions are exact.

1-1345	11-037	23-115	42-515
2-800	12-312	27-110	43-20
3-340	13-348	33-9	greatest breadth of
4-405	14-362	34-80	flukes (ant. post.): 130
5-275	15-540	35-232	length of fin tip to
6-518	16-428	36-20	post. insert: 390
7-905	17-850	37-30	
8-66	19-420	38-345	
9-27	20-105	39-80	
10-8	21-24	41-122	

No. 55 Finback ♂ Aug. 21-'08 Type, Alaska.

Left side rostrum + mid-dorsal region as far as tip of fin (land back) neutral tint - rest of mid-dorsal region to flukes + upper sides to opposite dorsal fin are light neutral - Sides of peduncle from dorsal to flukes is light gray - the light gray of the sides slants downward rapidly from opposite

anus to flukes - opposite anus the gray of the sides are separated in the mid-ventral line by a white area which is here 80 cent. wide -

Left side has all fins to mid-ventral line dark slate - for the first 6 folds ~~between~~ below fin insertion are slate - rest white on the side to mid-ventral line - from symphysis to fin 13 folds are dark - the anus of light color from insertion + tip of fin are well marked - the left ramus + upper half of throat are ventral.

Right side rest of light gray to opposite ear - remaining portion of upper side including fin to opposite tip of fin (laid back) is gray - rest of back + upper side like left. Right ramus white

excepting posteriorly where it is very light gray - 14 fins are slate + rest flesh-colored - first four folds below fin are dark - 8 folds between corner + mouth + insertion of fin are slate.

Flukes white in ventral portion having both margins slate + tip also slate - above like head.

Pectorals above left is light ventral -

Below bristles anteriorly are pure white

† posterior one half is tinged with grayish -
The mucous membrane in the roof
of the mouth is white tinged with light
purple

Hairs 27 on symplexis in vertical rows
Many of the "brush-like" markings on
peduncle

1-1810	11-4	23-85	43-62
2-745	12-490	27-98	ant-post. length of dorsal
3-400	13-605	28-451	is 96
4-490	15-780	30-6	length fin up to posterior
5-360	16-406	31-30	insertion = 167
6-635	17-1175	33-20	length white portion
7-1400	19-190	34-175	of baleen = 108
8-92	20-55	35-185	
9-15	21-40	41-178	
10-12		42-37	

No. 56 Finback ♂ Aug. 21-08 Tyee Alaska (Partly flensed)
Color Right rather very light gray - white
anteriorly - 11 dark folds between fin to
mid-ventral line - "arins" very distinct

Roof of mouth deep pink.

1-1870	18-238
3-405	19-212
5-370	20-551
6-650	23-951
8-89	28-49
10-10	42-44
11-3	
12-500	greatest breadth of flukes = 112
13-600	length fin up to post. insert = 185
15-845	
16-550 (?)	
17-1245	

No. 57 Fairback ♀ Aug 22-'08 Tyee Alaska.

Color Right nape & light gray - folds between
fins white - 19 dark furrows - a dark
whale

1-1815	11-8	27-75	42-63
2-780	12-514	28-50	43-50
3-390	13-540	29-47	Faintly to post.
4-480	14-575	30-6	insertion: 160
5-335	15-838	31-30	
6-610	16-460	33-20	
7-1365	17-1210	36-38	
8-85	19-195	37-25	
9-19	20-53	38-375	
10-10	21-38	39-80	
	23-89	41-170	

No. 58 ♀ Fairback Aug. 22-'08 Tyee Alaska

Color Left side rostrum + mid-dorsal
region to flukes light neutral - upper
sides a little lighter - Left nape
dark slate as is the extreme upper
portion of throat-side - 20 furrows
dark ~~from~~ ^{between} fin to mid-ventral line
the remaining 13 are flesh-colored - 7
folds between fin are dark - rest slate
white - the arms of dark color are
well marked - from anus back the
gray of the sides comes well
down toward mid-ventral line.
Flukes below have only narrow
margins of slate - the central part
being pure white
Pectorals, Left below white - only a

little grayish at tip - above fin is neutral.

1-1770	11-10	27-80	37-26
3-360	12-520	28-37	41-160
4-440	13-560	29-40	42-37
5-315	14-580	30-5	43-66
6-587	15-805	31-25	Fin (tip to post anal) = 120
7-1345	16-420	33-20	
8-82	17-1190	34-100	
9-13	21-30	35-290	
10-5	23-83	36-37	

& take a fresh inspiration. This air is sat-
 urated with water vapour at a high
 temperature, which when it strikes
 the cold surface of the atmosphere condenses
 at once forming a column of steam
 or spray, ~~this~~ is sent to a considerable
 height & thus has ^{the popular idea that} ~~an~~ ^{the animal}
 actually "spouts" water from its
 blowholes or nostrils. ^{whales will trace the} ~~how do~~
^{occurs of the world from north to south} ~~there is no~~ ^{in the cold water} ~~ice filled water~~
 of the Arctic ocean? Nature has
 provided for them wisely ^{by governing their} ~~whole body~~
~~from within~~ the skin & the
 the skin & flesh with a ~~thick~~ layer
 of fat or "blubber" which acting as a
 non-conducting layer, prevents the
 the absorption of the ~~animal~~ animal
 heat by the water. On the ~~right~~ ^{right} whales
 which live at the edge of the ice this
 blubber is very thick while in the seas
 which frequent warmer waters ~~the blubber~~
~~is~~ ^{it} ~~is~~ ^{is} correspondingly thinner.
 The whales of the world are divided
 into two ~~great~~ natural groups, viz,
 those having teeth, & those without
 teeth. ~~The toothed whales~~ ^{Those}
 of the 1st group of which the sperm
 whale is an example, have long
 been hunted for the oil & valuable sperm.

aceti which they yield; those of the second group, are not only without ^{the teeth but} ~~the~~ ^{the} ~~are~~ ^{are} characterized by plates of ^{bone} ~~bone~~ ^{the} "whalebone" ~~of~~ ^{of} commerce. This whalebone ~~is~~ ^{varies} in length from two ~~feet~~ ^{up to twelve feet} in different species, ~~the~~

For more than a thousand years the capture of Right whales, those yielding the largest whalebone & the greatest amount of oil, has been an important occupation with both European & American whalers, but only in comparatively recent times has the industry extended to the taking of the Porpoises, those whales with short coarse whalebone & thin blubber.

These whales were followed in a small boat, half rowed & filled with ~~the~~ hand labor. It was at best a dangerous occupation, & skill & courage were required in its prosecution, thus drawing to its ranks the best & most adventurous seamen. However with the gradual extermination of Right whales & the diminution in the numbers of species, attention was turned to the Porpoises, those

species having short coarse black hair
 & comparatively thin blubber.

Long & slender of body, & built like
 a racing yacht, the Finbacks &
 Sperm whales by their ^{great} speed
~~defied the small boat & hand launch~~
~~Then it was that the Norwegian~~
 whalers turned their attention, to
 perfecting ~~both~~ the methods of
 capture & the ~~boats~~ ~~boats~~ sturdy
 little steam whaling vessels
 of today, are the result. These
 boats are about one hundred feet
 in length, & carry on the bow
 a small cannon which shoots a
 harpoon weighing 110 lbs having
 an explosive head or point. When
~~as~~ a whale is killed it is filled
 with air, & towed in to the whaling
 factory.

A whaling station offers to the un-
 initiated a continued round of
 surprises. From the time the
~~great animal, weighing perhaps~~
~~perhaps~~ ~~is drawn out on the "slip"~~
 until the last piece of flesh has
 been put in the tanks where the oil
 is extracted, the ease & ~~simplicity~~
 quickness with which the great carcass
 weighing perhaps 70 or 80 tons is handled

is almost incredible. ~~The winter~~
 Thru the kindness of the Pacific
 Whaling Co. of Victoria B.C. & the Tyce
 Co. of Tyce, Alaska the writer had
 the opportunity of spending the summer
 at the summer whaling station
 on the coast platform.

The ship is a long whaler at a
 gentle slope to the water edge. On
 deck the side of ~~the~~ a stream which
 the whale is hauled, tail first. About
 before the tackle have been slacked
 & the great body is stationary. The
 "fleppers" are at work making long-
 itudinal incisions ^{along the blubber} from head to tail
 along the back ~~& sides~~ & breast. A table
 is fastened to the end of a strip, the which
 is started & slowly the great piece of
 blubber is slipped from the ani-
 mal's side, leaving the flesh exposed.

When one side has been flensed, the
 body is turned, & ~~the other~~ the remaining
 blubber removed & the entrails taken
 out. Then the ^{whale} carcass is hauled
 to the "carcass platform" where the
 meat is removed, the skeleton dis-
 articulated, & the bones chopped in
 pieces. Not a particle of the animal goes
 to waste - the blubber is "tried out" for the oil,
 the meat & bones are baled for the

same purpose & then ground up & dried, making guano or fertilizer. Even the blood is saved & dried for fertilizer & the water in which the blubber is boiled ~~is used~~ makes excellent glue. So like the proverbial hog of the Chicago stock yards, ~~not even the~~ where only the squeal is lost, is the fall of our King's manure.

The whole hunting today, while devoid of much of ^{danger} the excitement attendant upon the old time pursuit with hard harpoon & lance, is yet ~~full of~~ ~~peculiarly~~ ~~disgusting~~ ~~sport~~. ~~And added to the~~ The tense silent moments of waiting ~~the busy & expectant~~ ~~the momentary~~ the excitement of the ~~moment~~ when the great purple-lisk body rounds up right in front of the bows ~~the~~ ~~crash~~ of the harpoon gun, ^{upon the} the final struggles of this giant animal ~~all combined to would~~ ~~make it~~ ^{spring} the pulses leap & the throbbed blood run quick. As to this the keen pleasure of ~~recording~~ of sleeping with the adripera, & they are who this is well I think agree with me that better sport could not be wished. Never will I forget And to the ~~unpleasant~~ ^{the chase} ~~every movement~~ of the whole ^{ambly} is interesting. ~~Sketching~~

the ~~whales~~ which splashed along
 the shores of inland seas three
 million years ago

~~no mammal~~

That we have with us today the largest
 mammal that ever existed on the
 earth or in its waters is perhaps
 to most of us a fact unknown.

Not even the ^{largest of the} ~~giant~~ ^{splashed along the bays} ~~reptiles of prehistoric times~~ ^{the}
~~Dinosaurs~~, which ^{reached the length}
~~of 6 to 10 feet~~ ^{the colossal} ~~could equal in~~

size ^{of a} ~~the~~ ^{today} ~~the~~ ^{being taken} ~~the~~
~~whales~~ ^{which are taken annually}
~~the Atlantic by the Newfoundland~~
~~whaling fleet~~ ^{along}
~~both coasts of the North America~~
~~both coasts of North America.~~

~~Since~~ ^{For more}
 than a thousand years the
 history of ^{the greatest of mammals has been} ~~the~~ ^{known} ~~the~~
 of the world ~~has been~~ ^{known} and
 yet today their habits & specific
 relationships are only beginning
 to be known. With the advent of
 the harpoon gun & modern methods
 of capture, the whales of the world
~~have been~~ ^{are being} ~~killed at~~ ^{such an}
 alarming ~~rate~~ ^{rate} that ~~the threat~~
~~to~~ ^{the} ~~extinction~~ ^{is} ~~is~~ ^{is}
 imminent. Such as some of our
 largest museums are awakening
 to the fact that there is imminent
 danger of the race of great mammals

sea-faring
 animals

at inland
 seas which
 originated

being swept out of existence, ~~without~~
 with little of their history being known.
 That a whale is a mammal + not
 a fish has been known since the time
 of ~~the~~ ^{the} ~~ancient~~ ^{ancient} ~~times~~ ^{times} ~~the~~ ^{the} ~~great~~ ^{great} ~~systematist~~ ^{systematist}
~~Whitman~~ ^{Whitman} ~~his~~ ^{his} ~~theory~~ ^{theory} ~~of~~ ^{of} ~~the~~ ^{the} ~~Systema~~ ^{Systema}
~~Nature~~ ^{Nature} ~~class~~ ^{class} ~~of~~ ^{of} ~~them~~ ^{them} ~~as~~ ^{as} ~~fish~~ ^{fish}
 However few people realize that altho
 a whale lives in the water, it yet
 breathes air by means of lungs +
 must come to the surface to
 discharge the air from its lungs
 + take a fresh inspiration, +
 any land mammal would
 do if put in the water. ~~The~~ When
 a whale comes to the surface of ~~the~~
 its first act is to discharge the
 air from its lungs + take a
 fresh inspiration as a land
 mammal would do under
 like circumstances. This air is
 saturated with water vapour at
 a high temperature, & when it
 strikes the cold upper air, immedi-
 ately condenses forming a column
 of steam or spray, which is called
 the spout. Thus it is that the
 inspiration is given that the
 animal regularly blows water
 from out its nostrils.

That a whale is a mammal & not a fish has been known since the time of Linnæus the great systematist, yet how many of us realize that its life & functions are carried on much as in the animals which live on land. The young are born alive, & nursed with rich white milk from the mother's body.

The blood of the whale is warm & the young are born alive & nursed with rich white milk from the mother's body. The whale breathes air by means of lungs, which in essential structure are like those of a horse or cow ~~but at the surface~~ & where below the surface must hold its breath or drown. When a whale comes to the surface its first act is to expel the air from its lungs & take a fresh inspiration. This air is saturated with water vapor at a high temperature which when it strikes the cold upper air condenses at once, forming a column of steam or spray. This "spray" has given rise to the popular impression that a whale blows water from out its nostrils, which was taken in while feeding.

It is believed that whales originally descended from land mammals for in structure & functions of life

the two are very similar, ^{but from what particular group they descended is unknown} ~~leathery~~ hairs
are present & even the rudiments
of the hind limbs are ~~found~~ in
same ~~form~~ species.

Since the advent of the harpoon
gun & modern methods of capturing
For many years the whale has
occupied an important place
in the commercial history of
~~some~~ sea-faring nations, ~~but~~
~~since the advent of the harpoon~~
~~gun & improved methods of~~
~~capturing~~ & its oil & whale bone have
been used, for centuries, but since
the advent of the harpoon gun
& improved methods of capturing
whaling ^{it} has destined to become a great
industry on the coasts of North
America. In the old days of
the hand lance & harpoon & lance

Since the beginning of the century
the whale has occupied oil & whale-
bone have occupied an important
place in the commercial world
~~but since the advent of the harpoon~~
~~gun & the species which yielded the~~
greatest amount of these products
were pursued ~~from~~ from farther

*Intelligent
whales
caught many
times and*

water even into the arctic circle.
~~However with the advent of the~~
+ the species with the river blub-
ber + coarser whalebone were
not selected. However with
the advent of the harpoon gun
+ improved methods of capture
there, latter varieties, namely
the Finbacks Humpbacks & Sulphur-
bottoms are taken in great numbers
+ are being marketed, etc.

with camera ready, he must be
~~ever on the alert~~ ever on the
lookout for the unexpected,
~~Perhaps~~ for it is this that
always happens. Perhaps
with out a sound of warning
a Humpback will throw himself
clear of the water, or ~~throw~~
open his great mouth almost
at the vessels bow, ~~offering~~ it
may be in front, or on either
side, but you may always
be sure that it will come when
least expected.

Never will I forget one morning
in early May when I was awakened
by a knock at the door + the voice

of the watchman saying "It's four o'clock now, & the
whaler is ready to go" I was out of bed in an
instant, ^{after} pulling on my hip boots almost
before I was fully

measurements of whales taken at
 Tyne Alaska during 1908 - The whales
 were measured in a straight line
 from flukes to tip of lower jaw ^{after} ~~then~~
 they were drawn out on the slips. The
 measurements were furnished me by Mr.
 Victor H. Street, Manager of the station

March 27	Finback	♂	= 64 feet	
" "	"	♀	= 62 "	
" 28	"	♀	= 63 "	
April 14	"	♀	= 65 "	Contained a fetus 21"
May 4	"	♀	= 69 "	
" 13	"	♀	= 64 "	
" 16	"	♂	= 58 "	10 inches
" "	"	♀	= 67 "	
" 15	Humpback	?	= 41 "	8 "
" 19	"	?	= 38 "	2 "
" 21	Finback	♂	= 60 "	10 "
" "	"	♂	= 60 "	
" "	"	♂	= 67 "	
" 25	Humpback	♂	= 48 "	6 "
" "	"	♂	= 48 "	
" 29	Finback	♂	= 58 "	
" "	"	♂	= 60 "	3 "
" 30	"	♀	= 63 "	
" "	"	♀	= 63 "	7 "
" "	"	♀	= 62 "	6 "
" 31	"	♀	= 59 "	9 "
" "	"	?	= 59 "	4 "
" "	"	♂	= 63 "	5 "
June 1	"	♂	= 60 "	3 "

June 2-'08	Fairback	♀	= 67 feet 6 inches	
" 3 "	"	♀	= 68 " 2 "	
" 3 "	"	♀	= 60 " 8 "	contained foetus
" 6 "	Humpback	♀	= 48 " 4 "	
" 8 "	Fairback	♀	= 68 " 2 "	contained foetus 4 ft. 6 in.
" " "	Humpback	♂	= 44 " 7 "	
" 13 "	"	♀	= 38 " 4 "	
" 15 "	Fairback	♀	=	
" 19 "	"	♂	= 53 " 10 "	
" " "	"	♀	= 62 "	
" 22 "	"	♀	= 63 " 3 "	
" 23 "	"	♀	= 59 " 6 "	
" 25 "	Humpback	♀	= 49 " 7 "	
" 27 "	Fairback	♀	= 57 " 7 "	
" 29 "	"	♂	= 63 " 4 "	
July 3-'08	"	♀	= 67 " 1 "	
" 9 - "	"	♀	= 63 " 3 "	
" " "	"	♀	= 63 " 6 "	
" " "	Humpback	♂	= 39 "	
" 10 "	Fairback	♀	= 60 " 4 "	
" " "	"	♂	= 66 " 1 "	
" " "	"	♂	= 63 "	
" 13 "	"	♀	= 60 " 2 "	
" " "	"	♀	= 60 73 ft. 10 inches	
" " "	"	♂	= 60 " -	
" " "	"	♂	= 60 " -	
" 15 "	"	♂	= 60 " 2 inches	
" " "	"	♂	= 60 "	
" " "	"	♀	= 60 " 10 "	
" 18 "	"	♂	= 69 "	
" " "	"	♂	= 59 " 4 "	
" 20 "	"	♂	= 43 " 2 "	

July 20	Humpback	?	=	42 feet 10 inches
" 21	Finback	♀	=	70 "
" "	"	♂	=	59 " 7 "
" "	"	♀	=	64 " 5 "
" 25	"	?	=	69 "
" "	"	♂	=	67 " 3 "
" "	"	♀	=	64 "
" 30	"	♂	=	59 "
" "	"	♂	=	61 " 7 "
Aug 1	"	♂	=	59 " 5 "
"	"	♀	=	63 "
"	"	♂	=	63 " 9 "
"	"	♂	=	64 " 4 "
" 4	"	♀	=	64 " 7 "
" "	"	♀	=	65 "
" 5	"	♂	=	61 " 4 "
"	"	?	=	63 " 7 "

Squalorhynchus

Skeletal measurements of specimen prepared ~~by~~ by Mr. S. C. Ruckus at Kyrgyzst & now being exhibited by Mr. Geo. Langley & Co at Victoria

Date, March 08 - Kyrgyzst B. C.
Length 79 ft. 6 in. to tip of lower jaw from notch over rook.

The following data Mr. Ruck gave me & as he prepared the skeleton most carefully it is undoubtedly correct.

Ribs The specimen had 15 ribs left side & 14 right side - the 14th was very short & of course rudimentary.

Vertebrae C₇ D₁₅ S₁₅ Ca 26 = 63

Manus 4 metacarpals
I₄ II₇ III₆ IV₃ ("surely correct," Ruck)

The manus of this whale were lost in a fire at the station so a pair from another whale were substituted. This whale had the following formula in both pectorals

I₄ II₇ III₆ IV₄ ("surely correct," Ruck)

The ribs of this whale were broken in one or two places so another set were substituted. This whale had 16 pr. and the last pair were long not being rudimentary.

As the skeleton is now exhibited it is as follows:

Everything is from the original whole except - the ribs - the pharyngeal the chansons, & the pelvic bones.

Skull (I took these measurements myself) from the cleared skeleton

Length (condyles to tip straight below) : 600^{cut}
 Breadth (squamoseal) greater = 290
 Length rostrum (from proximal end of maxilla) straight = 500
 Length nasals (median) = 35.
 " mandibles (straight) = 580
 " " (curved) = 595.
 Depth " at center = 45.
 " " " coronoid (straight) = 80
 Width orbital process of frontal = 30
 " of squamoseal = 120
 " of rostrum at middle (straight) = 170
 Depth of skull vertex to lower edge of pterygoids = 110

Scapula Height = 91^{cut} Breadth 150 Length acromion (lower edge) = 45 Length coracoid (lower edge) = 251 Breadth g. f. 3.
 Length skeleton (as mounted) = 2370

Radius length = 105 - breadth distally = 35 Length ulna = 98
 breadth ulna distally = 24 Length humerus = 68
 Length 1st rib = 150 straight
 " " " (curved) = 170
 Breadth " " (distally) = 18

Kyrgyz

July 16-08 Humpback ♀ Length = 46 feet.

@ Stereog

Chumons = 10 - 1st + last small + free ditely
+ 3rd highest of series.

C 7 D 14 I 12 Ca 19 = 5-2 Seu

The last very small caudal which is
frequently found is represented in
this whale only by a mass of cartilage
containing no ossification whatever.

This whale contained a ♂ foetus no.
41 which was 154 cent. long.

Kyrgyz

July 16-08 Humpback ♂ Length = 1260

Kyrgyz

July 16-08 Humpback ♂ Length = 1380

On July 17th at Sechart a ♀ Humpback
contained 2 foetal whales each
about 18 inches long

In Provincial Museum are two foetal
Humpbacks about 8 inches long
which were taken from the same
mother at Sechart in 1907

Humpback ♀ July 23-08 Kyrgyz B.C.
Length 1290

127 Chumons lacking

Humpback ♂ July 23-08 Kyrgyz B.C.
Length = 1350

C 7 D 14 I 11 Ca 21 Seu

There are 10 Chumons

the 3rd is highest of series. 1st very small
 + free distally - 2nd has a distinct haemal
 spine & is much larger than 1st -
 1st rib is single headed - 2nd has large
 tubercle + short thin neck + head - 3rd
 has large tubercle + long neck + head -
 the largest of the lot - 4th has neck
 + head + large tubercle about size of
 no 2. All other ribs are single headed
 becoming shorter + broader as they go
 back

306 laminae of baleen on one
 side -

July 24-08 Humpback ♂ Kyequut, B.C.
 Length = 1220

Bumbers all pure white except
 for one or two little light gray patches
 at base. D. fin is 30 high + is on
 a prominent hump - both edges
 are white

Aug. 8 Tyee, Alaska Finback
 Length = 59 ft 11 inches

Aug 10 Tyee Alaska ♂ Finback Length = 61 ft. 10 in
 " " " " ♀ Humpback " = 42 ft. 2 "

On Aug 16 a Finback whale was taken at Tyee, Alaska which had a great quantity of herring in its stomach. The herring averaged about 8 inches in length. It was estimated that the stomach contained $3\frac{1}{2}$ to 4 bbls. of the fish. The stomach also contained a few of the shrimp, which is their usual food, in ~~an~~ more or less digested condition. Mr. Street, manager of the station, says that this is the first case of a Finback containing fish of any sort, that has come under his notice.

I measured the distance between the laminae of the baleen in a Finback whale & found the plates to be $\frac{1}{2}$ inch apart - There was practically no variation, all the plates (except the very anterior & posterior ones) being the same distance apart.

Capt. G. A. Huff.
Albernie B.C.

Rose Haver

Morrisby Is.

of Inver Charlotte

Wm. C. Biddle

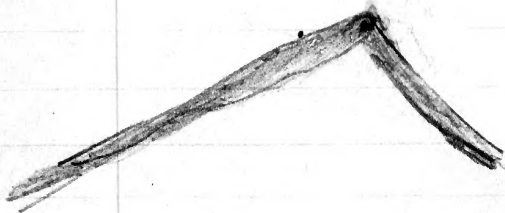
78 Reade St.

New York N.Y.

Look up friend of
Capt. Biddle

W. F. Osborne

Hotel Margret
Brooklyn



P.M. Cushing
Eve. Mail

Dr. Hunter 201
83 Seaside

Fe Roy. Robinsons
of Nail. Sweeper Co
Newark N.J.

Lanchester
Eve. Journal
3 &

M. Herbert Sherwood
N.Y. Tribune (Sunday)
(3 photos.)

Moran

~~American~~

3 photos

Wright
Ward
(4 photos)

Harvey & Outbridge
11 B. way
N.Y.

Kenneth Fowler
* 1, Fulton Market
New York

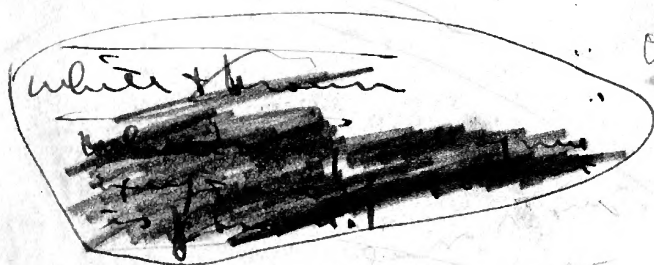
Ester Robbins, of
Robbinsdale,
Minn.

m. Brase
* 1 Broadway
Room 153

1251 dinner

add 2 meters to ^{circ. of} Humphreys for length
of 1200 and 3 meters for length
of 1410 and. This should be added to
the circumference of all Humphreys
measured at Rechart

Dr. W. N. Copeland
office 438 S. 40th Ave



#28 Forest Home
Oak Park

may
national Ph. Sem.
NA

second book to Capt. Hebbard
about letters
copies to Kenneth
bates reg. to Funder

^{needed}
Lumber, for boxing Bueflumbastian
skeleton.

2000 feet	3 X 12	Roofs
200 "	3 X 6	"
1000 "	1 X 12	"
400 "	2 X 4	"
50 lbs	6" nails	
500 "	1 1/2" "	

For Humpback skeleton get

1350 ft	2 X 12	R
550 "	2 X 6	"
1000 ft	1 X 12	"
400 "	1 X 6	"
nails as above		

About 30 blbs. of oil from a Finback
42 gal = 1 blb. This includes blubber, meat &
340 lbs. = 1 " none oil.

A Humpback taken at Tyee Alaska had
a great many small Cod fish in its stomach,
the largest being about 16 inches
long. This statement derived from
several persons who saw the whale.

